

t33\_pcs\_0  
(TMJQNk1p7AePk5RP8uj4Rn7q4f5i8FGFPkW)

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Let  $l2\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k20\_pcs\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $l1\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $v12\_pcs\_0 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $u1\_pcs\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (k3\_relset\_1 X0 X1 X2 = k2\_relat\_1 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (k2\_relat\_1 (k2\_relat\_1 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (u1\_orders\_2 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. (l2\_pcs\_0 X0) \Rightarrow ((l1\_orders\_2 X0) \wedge (l1\_pcs\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (l2\_pcs\_0 X0) \Rightarrow ((v12\_pcs\_0 (k20\_pcs\_0 X0)) \wedge (l2\_pcs\_0 (k20\_pcs\_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow ((X1 = k2\_relat\_1 X0) \Leftrightarrow (\forall X2. \forall X3. (k4\_tarski X2 X3 \in X1) \Leftrightarrow (k4\_tarski X3 X2 \in X0)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarSKI X0 X1 = k2\_tarSKI (k2\_tarSKI X0 X1) (k1\_tarSKI X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_orders\_2 \\ X0 X1 X2) \Leftrightarrow (k4\_tarSKI X1 X2 \in u1\_orders\_2 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2\_pcs\_0 X0) \Rightarrow (\forall X1.((v12\_pcs\_0 X1) \wedge (l2\_pcs\_0 \\ X1)) \Rightarrow ((X1 = k20\_pcs\_0 X0) \Leftrightarrow ((u1\_struct\_0 X1 = u1\_struct\_0 X0) \wedge ( \\ u1\_orders\_2 X1 = k3\_rset\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0) \\ (u1\_orders\_2 X0)) \wedge (u1\_pcs\_0 X1 = k3\_subset\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ X0) (u1\_struct\_0 X0)) (u1\_pcs\_0 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarSKI X0 X1 = k2\_tarSKI X1 X0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (11)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(l2\_pcs\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ (m1\_subset\_1 X3 (u1\_struct\_0 (k20\_pcs\_0 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 \\ X4 (u1\_struct\_0 (k20\_pcs\_0 X0))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow ((r1\_orders\_2 \\ X0 X1 X2) \Leftrightarrow (r1\_orders\_2 (k20\_pcs\_0 X0) X4 X3)))))) \end{aligned}$$